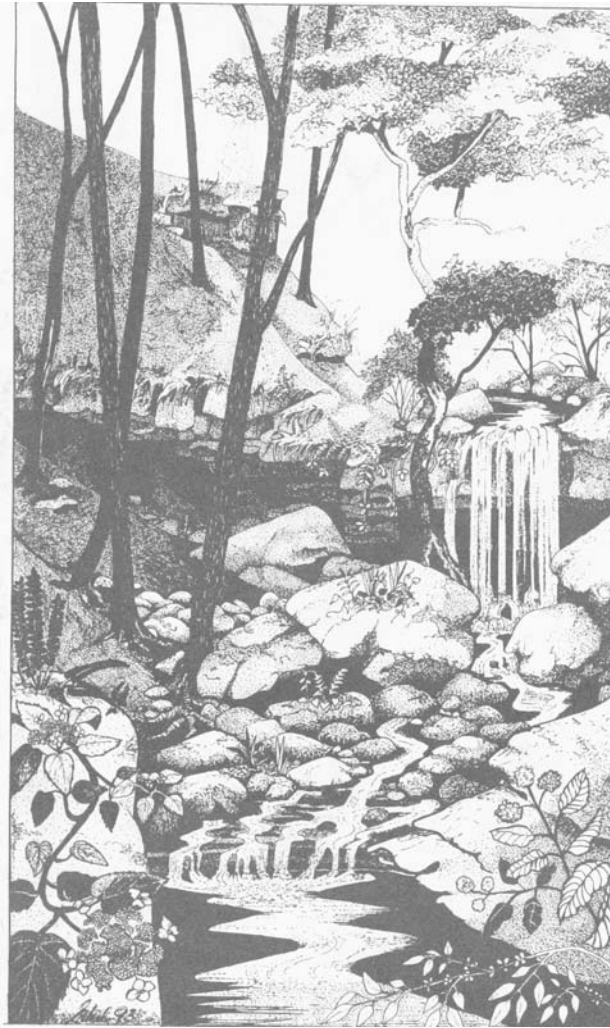


COWARDS HOLLOW NATURAL AREA



MARK TWAIN NATIONAL FOREST ELEVEN POINT RANGER DISTRICT

WHAT IS A NATURAL AREA?

Much of Missouri's original landscape no longer exists, but thanks to the Missouri Natural Areas System, some examples of it are being preserved and protected. Natural areas are important benchmarks to evaluate environmental change and serve as reservoirs of the state biological diversity. Additionally, natural areas provide opportunities for scientific study as well as educational, cultural, and recreational uses. Through protection from development and by managing to preserve the natural characteristics of the areas, the best examples of natural communities are preserved. Natural areas often provide essential habitat for rare and endangered plants and animals.

The Missouri Natural Areas Committee is an interagency committee, consisting of representatives of the Missouri Department of Conservation, Missouri Department of Natural Resources, National Park Service, U.S. Fish and Wildlife Service, The Nature Conservancy and the USDA Forest Service, who coordinate the classification, inventory, designation, and stewardship of natural areas in Missouri. Natural areas are owned by a variety of public agencies as well as private concerns.



The Mark Twain National Forest has a wide selection of natural areas, consisting of fens, sinkhole ponds, glades, forests, and aquatic communities.

COWARDS HOLLOW NATURAL AREA

Cowards Hollow Natural Area has a number of significant geological features, as well as natural plant communities.

GEOLOGICAL FORMATIONS

The most important geologic features are: the chert shut-in (a narrow, steep-sided ravine along the course of an otherwise broad stream valley), chert cliffs (vertical walls of exposed chert bedrock), and a shelter cave. All these features are formed out of an uncommon massive bed of chert rock, measuring up to forty feet in places. An exposure of this magnitude is not known in any other location in the state. Chert formations vary from other rock formations because they do not easily break down with weathering. The shut-in begins with a 10 foot waterfall spilling down into a narrow stream that is scattered with massive chert boulders. Along the south wall is a large chert shelter cave, rich in local history.

FEN AND SEEP-FED STREAM

A series of small wet-weather seeps, 150-500 yards above the waterfall, create a fen plant community and add to the stream that flows through the shut-in. A fen is characterized by an upwelling of mineral-rich groundwater forming ooze areas and spring rivulets. The open portion of the fen is dominated by bulrush, sedges, hog fennel, winged loosestrife, sensitive fern, marsh coneflower, and royal fern, while common alder and Ward's willow rim the edges.

GRAVEL WASH

Gravel wash communities occur in streambeds composed of sand, silt, mud, gravel, and boulders. These materials constantly change with each flooding. The slopes are steep and flash floods are a seasonal occurrence. Many fallen and damaged trees are evident along the stream. At Cowards Hollow, the gravel wash natural community makes up most of the streambed above the fen and throughout the shut-in. Sycamore, northern red oak, and white oak are scattered along the banks. Shrub thickets of common alder and spicebush occupy the gravel deposits alongside herbaceous species such as sea-oats grass, self heal, ironweed, and cardinal flower.

MOIST CHERT CLIFF

Along the walls of the shut-in are chert cliffs, 5-20 feet high. The rocks are splashed with dense mats of multi-colored lichens, while ferns and mosses extend from the cracks and small ledges. Ebony spleenwort, maidenhair spleenwort, walking fern, Christmas fern, and hairy lip fern are all found in the moist chert cliff.

WILDLIFE AT COWARDS HOLLOW

Cowards Hollow provides habitat for cliff-nesting species such as turkey vultures, eastern phoebes, and northern rough-winged swallows. The cave may be used by a variety of bats, including the eastern pipistrelle, big brown bat, or the rare small-footed myotis. The eastern wood rat often builds its nest in caves and the grotto salamander may be found in the darker recesses. Around sunrise and sunset a variety of animals are likely to visit the water holes, and in the spring, frog and toad tadpoles can be seen along the banks.

Be sure to use the **WHAT TO LOOK FOR AT COWARDS HOLLOW** checklist when visiting this natural area.



OWNERSHIP AND MANAGEMENT

Owned and managed by USDA Forest Service, Mark Twain National Forest – Eleven Point Ranger District.

SPECIAL REGULATIONS

Camping, hunting, trapping, fishing, and the collection of plants or animals is prohibited. Enjoy hiking and all other activities normally allowed on the National Forest.

ADDITIONAL NATURAL AREAS

You may wish to visit the nearby natural areas listed below on the same day. For more information on a particular site, check ownership and contact the Forest Service Ranger District office, National Park Service – Ozark National Scenic Riverways, or the Department of Conservation Wildlife District Supervisor in the town listed.

Big Barren Creek	USFS	Doniphan, MO
Wells Branch Fen	USFS	Doniphan, MO
Haney Pond	USFS	Doniphan, MO
Cupola Pond	USFS	Winona, MO
Marg Pond	USFS	Winona, MO
Overcup Oak Sink	USFS	Winona, MO
Mill Mountain	NPS	Van Buren, MO

SIZE, LOCATION, AND ACCESS

Fifty-six acres in Carter County.

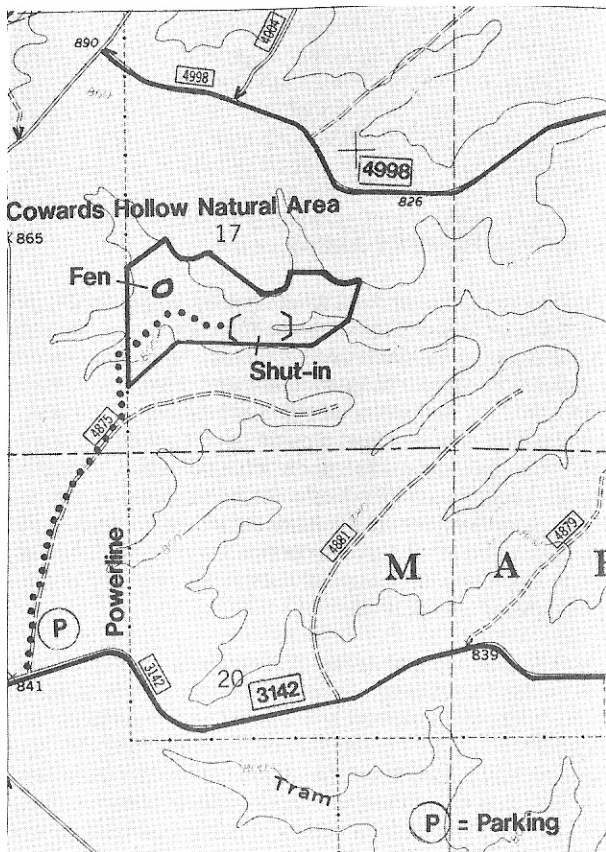
Located in a portion of section 17, T25N, R1W of the Handy 7.5 topographical quadrangle.

From Doniphan: Take U.S. 160 west to State highway C and go north 13 miles. Turn onto Forest Road 3142 on the east side of highway C. Go 2.5 miles to Forest Road 4875 on the left. Travel 0.3 miles and park. Walk the log road to the power line, then follow the foot trail under the power line and watch for Natural Area signs.

WHAT TO LOOK FOR AT COWARDS HOLLOW NATURAL AREA

Fowler's toad	ebony spleenwort
grotto salamander	maidenhair spleenwort
longtail salamander	walking fern
six-lined racerunner snake	Christmas fern
eastern pipistrelle	hairy lip fern
big brown bat	sea-oats grass
small-footed myotis	self-heal
eastern wood rat	cardinal flower
eastern phoebe	ironweed
northern rough-winged swallow	spicebush
turkey vulture	common alder
raccoon	sycamore
pearly-eye butterfly	northern red oak
white-tailed deer	white oak

E = endangered R = rare WL = watch list



FOR FURTHER INFORMATION, CONTACT:

Forest Supervisor
401 Fairgrounds Road
Rolla, MO 65401
(573) 364-4621

Eleven Point Ranger District
#4 Confederate Ridge Road
Doniphan, MO 63935
(573) 996-2153

